RECORD OF DECISION
FOR THE REVISED LAND AND RESOURCE MANAGEMENT PLAN DANIEL BOONE NATIONAL FOREST

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Record of Decision
for the
Revised Land and Resource Management Plan

Daniel Boone National Forest

Bath, Clay, Estill, Jackson, Harlan, Knox, Laurel, Lee, Leslie, McCreary, Menifee, Morgan, Owsley, Perry, Powell, Pulaski, Rockcastle, Rowan, Wayne, Whitley, and Wolfe Counties, Kentucky

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INTRODUCTION

This document is a Record of Decision approving a Revised Land and Resource Management Plan for the Daniel Boone National Forest. It documents the selection of a specific alternative from among those considered, and it provides the rationale for that selection.

The Forest and Rangeland Renewable Resources Planning Act (RPA), as amended by the National Forest Management Act (NFMA), directs that each national forest develop a comprehensive forest management plan, and that these plans be reviewed and updated every 10 to 15 years, or earlier if conditions change significantly. This revision of the Forest Plan is part of the long-range national resource-planning framework. In addition to the RPA and the NFMA, the National Environmental Policy Act (NEPA), Government Performance and Results Act of 1993 and the 2000 Revision of the USDA Forest Service Strategic Plan guide the revision process.

The first forest plan for the Daniel Boone National Forest was approved in September 1985. That plan was amended 14 times over the years as new information became available, and issues and conditions changed. Even so, an analysis of the current management situation identified a need to revise the forest plan to better reflect changing conditions, evolving public values, new scientific findings, new laws and regulations, and current agency policy.

A Draft Environmental Impact Statement was developed to document the consideration of several alternative management schemes and the anticipated environmental consequences for those alternatives that were given detailed consideration. A Proposed Revised Forest Plan was also developed as a reflection of the agency's preferred alternative. Public feedback on these documents was used to help develop a Final Environmental Impact Statement and the Revised Forest Plan approved by this Record of Decision.

National Forest management is complex. The national forests belong to all Americans and all have a stake in their management. Choosing the best course of action involves trade-offs. As stewards of these important lands, we have a responsibility to consider the whole collection of diverse interests that make up the American public and make management decisions that respond to those interests within the capability of the land to sustain forest resources and public uses.

OVERVIEW OF THE NATIONAL FOREST

The Daniel Boone National Forest is the only national forest located entirely in Kentucky. The National Forest extends over 140 miles along the western edge of the Cumberland Plateau from the Tennessee border to within 20 miles of the Ohio border. Today, over 700,000 acres is federally owned and managed by the Forest Service within a proclamation boundary that encompasses a total of 2.1 million acres. The federally owned tracts are discontinuous and scattered within the proclamation boundary.

Individuals hold most of the privately owned land in tracts averaging from 100 to 300 acres. The Forest is located within three major river basins—the Licking, Kentucky and Cumberland.

The forests of eastern Kentucky have undergone much change since the end of the last ice age. We would not have recognized the forest then. It was mostly jack pine and spruce inhabited by eastern woodland bison, wooly mammoth, wolves, and sabre-toothed cats. Besides climate, fire was the single most important influence that shaped the pre-European forests of eastern Kentucky, and most of that fire is presumed to have been started by aboriginal natives as a means to manage their environment for a variety of purposes. Following the arrival of the Europeans, including the Forest's name-sake explorer, clearing of steep mountain land for farming and grazing, mining, widespread logging and wildfires, and introduction of non-native invasive species like the fungus that causes chestnut blight changed our forests significantly. The dominance of oak, hickory, and southern pines throughout much of the Daniel Boone National Forest today is due to extensive disturbance by both humans and nature over a very long period.

The Daniel Boone National Forest faces threats today that are much different from those in the past. Many areas of the forest are now in a stressed condition because of overcrowding. Fire has not been allowed to play the dominant ecological role it did in years past, which included thinning the forest and providing the necessary conditions for regeneration of many important plant species.

Both old and new invasive species also threaten the health and stability of the Daniel Boone National Forest. A severe southern pine beetle infestation of just a few years ago killed a majority of the southern pines on the forest. Dogwood anthracnose is eliminating many of the understory dogwoods that create such beauty in the spring. Gypsy moth and hemlock wooly adelgid loom outside the boundaries of the national forest with the demonstrated potential to significantly change the species mix that we have now.

The passage of the Organic Act in 1897 provided a framework for the establishment of the first national forests by specifying that "no national forests shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States." The Weeks Act of 1911 then gave important impetus to the establishment of national forests in the eastern United States by authorizing the purchase of lands "as may be necessary to the regulation of the flow of navigable streams or for the production of timber." It was very shortly after the passage of that act that the Forest Service began examining headwaters areas of eastern Kentucky for their suitability as a national forest. Purchase of lands by the federal government began in 1933 and the Cumberland National Forest was proclaimed by President Roosevelt in 1937. The name was changed to the Daniel Boone National Forest in 1966.

Over the years, the Cumberland National Forest and the rest of the national forest system were used and managed for much more than just watershed protection and timber production. In 1960, Congress officially recognized the many additional uses of the national forests in the Multiple Use-Sustained Yield Act. It specifically added outdoor recreation, wilderness, range, wildlife and fish to timber and watershed as resources to be

managed on the national forests. Subsequent laws added management direction for additional resources such as air, and threatened and endangered species. As society's needs have changed, so has management of the national forests, following the multiple use mission directed by Congress.

Today the Daniel Boone is a favorite destination for recreationists pursuing a broad variety of activities. The products harvested and mined from the national forest contribute to vital national needs and local economies. These uses all take place in one of the most biologically diverse areas of the country. The Daniel Boone supports a substantial number of native plants, birds, aquatic species, and other types of wildlife, and the management direction contained in the Revised Forest Plan will help provide for their sustainability.

MY DECISION

I selected Alternative C-1 from the Final Environmental Impact Statement for the Revised Land and Resource Management Plan for the Daniel Boone National Forest (Forest Plan). I have decided that Alternative C-1 (the Selected Alternative) does the best job of incorporating scientific analysis and responding to the views of American citizens, legal mandates, and national policy to meet the multiple-use mission of the Daniel Boone National Forest. The Selected Alternative is a modification of the Preferred Alternative in the Draft Environmental Impact Statement issued in May 2003. By selecting this alternative, I am also approving the Revised Forest Plan that describes in detail the desired future conditions, goals, objectives, standards, prescription areas, management areas, lands suitable for various uses, lands administratively available for federal mineral leasing, as well as lands I authorize (consent) the Bureau of Land Management to offer for oil and gas leasing.

My decision strikes a balance between competing demands expressed by many people. It addresses the needs and desires that American citizens have for this National Forest. Although this decision is mine, it has not been made alone. Thousands of comments were received during the development of the Revised Forest Plan beginning in 1994. These comments helped guide the Forest Management and Interdisciplinary Teams as they developed the Revised Forest Plan. This Record of Decision and the supporting documents will shape the management of the Daniel Boone National Forest for the next 10 years or more.

The Revised Forest Plan meets our legal obligations to the people and environment that surrounds them. I want to make it clear that the Forest Service understands its special role in managing the National Forests. The Selected Alternative maximizes net public benefits for future generations to use and enjoy. It employs strong conservation measures to protect, maintain, improve, and restore our sources of clean water, habitat for all native plants and animals, old growth conditions, and the unique scenic beauty of the Daniel Boone National Forest. It maintains and restores a healthy, resilient forest to reduce risks from wildfire, insects, disease and other threats.

The management direction in the Revised Forest Plan dovetails nicely with the Healthy Forests Restoration Act enacted in 2003. They both recognize the imperative of restoring the historical role of fire and of taking action to address serious insect and disease threats to the Forest. They will work together in providing the means to take such actions.

Through their representatives in Congress, Americans have told the Forest Service that the 191 million acres of their National Forests and Grasslands are to be managed with a multiple-use philosophy. The Selected Alternative continues to provide a supply of timber products, a wide variety of recreation experiences with an emphasis on dispersed opportunities, unrestricted hunting and fishing, natural gas, high-quality limestone, utility corridors, and communication sites.

I believe the Forest Plan is within the physical and biological capability of the land and that this alternative can be implemented without reducing that capability. This decision applies only to the Daniel Boone National Forest lands and does not apply to any other Federal, State, or private lands, although the effects to these lands and the effects of my decision on lands surrounding the forests were considered.

COMPONENTS OF THE DECISION

The FEIS and Revised Forest Plan were developed according to the National Forest Management Act (NFMA), its implementing regulations, 36 Code of Federal Regulations (CFR) 219, National Environmental Policy Act (NEPA), and the Council of Environmental Quality (CEQ) regulations, 40 CFR 1500- 1508.

The Revised Forest Plan provides direction to assure coordination of multiple-uses (outdoor recreation, timber, watershed, wildlife and fish, and wilderness) and sustained yield of products and services [16 USC 1604(e)]. It fulfills legislative requirements and addresses local, regional, and national issues. The FEIS discloses the environmental consequences of the alternative management strategies and how they respond to the issues. I have studied and considered the FEIS in order to make the following decisions:

1. Management direction and associated long-range goals and objectives for the next 10 years or more in order to provide for multiple use and sustained yield of the products and services people use from the Forest, including outdoor recreation, timber, water, wildlife, fish, and wilderness. The Revised Forest Plan establishes this direction in Chapter 2. [36 CFR 219.11(b)]

2. Management areas, which reflect biological, physical, watershed, and social differences; and **management prescriptions**, which reflect different desired conditions and provide the specific information used to develop projects to implement the Revised Forest Plan. The Revised Forest Plan establishes four management areas in Chapter 4 and displays them on a map at the front of that chapter. The management prescriptions are described in Chapter 3 and displayed on a set of maps included in the Revised Forest Plan. [36 CFR 219.11(c)]

3. Standards, which set the sideboards for achieving the goals, objectives and desired conditions, as well as provide meaningful direction when implementing projects. The Daniel Boone Revised Forest Plan contains standards that apply across the entire Forest

in Chapter 2 and those that apply to specific areas of the Forest in Chapter 3. [36 CFR 219.13 to 219.27]

4. Lands suitable for different types of uses, and on lands which are suitable for timber production, the maximum timber harvesting levels (or **Allowable Sale Quantity**) ensuring a sustained yield of wood products in perpetuity. The suitability of different lands for different uses on the Daniel Boone National Forest is described by management prescription in Chapter 3. Lands suitable for timber production are noted in the Setting description at the beginning of each management prescription and they are listed in Appendix C. The Allowable Sale Quantity (ASQ) is determined to be 21.9 million cubic feet for the first decade. [36 CFR 219.14 and 36 CFR 219.16]

5. Evaluation of roadless areas. The Forest was surveyed for areas meeting the criteria as Inventoried Roadless Areas. One area was identified but is not being recommended for Wilderness designation. [36 CFR 219.17]

6. Oil and gas leasing – land availability and consent. My decision includes two area-specific decisions. The first is to make all lands within the Daniel Boone National Forest, except approximately 17,400 acres of federally owned minerals identified in this EIS, administratively available for oil and gas leasing [36 CFR 228.102(d)]. The second decision is to authorize (consent) the Bureau of Land Management to offer those specific lands for lease [36 CFR 228.102 (e)].

7. Monitoring and evaluation requirements needed to ensure that the direction is carried out and to determine how well outputs and effects were predicted. These requirements are contained in Chapter 5 of the Revised Forest Plan. [36 CFR 219.11(d)]

RATIONALE FOR THE DECISION

Introduction

My decision to select Alternative C-1 for implementation is based on a careful and reasoned comparison of the response of each alternative to the 14 significant issues. These issues represent the multiple uses and conflicting demands of the Daniel Boone National Forest.

Each of the alternatives considered in the Environmental Impact Statement meets existing environmental and resource management regulations. They each also accommodate multiple uses of the Daniel Boone National Forest and include both strengths and weaknesses according to the specific emphasis in their design. In considering the response of the alternatives to the significant issues, I chose Alternative C-1 because it encompasses an ecological approach to forest management and provides a logical and sound evolution from the management direction in the 1985 Forest Plan (Alternative A); it provides for more than the minimum habitat requirements for keeping viable populations of native and desirable non-native species, and goes further by setting objectives for the restoration of rare and missing ecosystems; it provides for the management that will be necessary to maintain the forest vegetation in a healthy condition that is more resilient to large scale disturbance events; and it recognizes the

importance to the American citizens of the recreation opportunities on national forests by placing a secondary emphasis on managing for those opportunities. None of the other alternatives would accomplish all of these things to the degree that Alternative C-1 will.

The Selected Alternative continues the multiple use approach that has directed the management of this forest since its inception and resulted in the wonderful array of resources that we now manage. Multiple use management, by its nature generates issues and often conflicting values emerge. At first glance, resolution of such conflict may seem insurmountable. However, after reviewing the comments received on the Proposed Revised Forest Plan, the Selected Alternative meets most of the desires on at least a portion of the National Forest. Some needs do directly conflict with each other, but most can co-exist very well.

For those interests and needs that do conflict we have areas allocated to emphasize certain resources. For example, we have areas where no commercial activity is allowed and these meet the need for solitude, scenic beauty, and ecological processes that take place with a minimum of human influence. We have other areas where commercial timber harvest helps achieve wildlife and forest health objectives while producing wood products. Of course the underpinning that holds multiple use management together is proper protection of the basic resources of soil and water. The Selected Alternative fully protects water quality throughout the forest by establishing a new Prescription Area with management direction that emphasizes riparian and aquatic conditions. Maintaining habitat for the species of plants and animals that live on the Forest is also a cornerstone of the plan.

My reasons for choosing the Selected Alternative are discussed below on an issue-by-issue basis. They explain why I believe Alternative C-1, as described in the FEIS, will maximize net public benefits when compared to the other alternatives. Chapter 3 of the FEIS describes in detail the effects of expected management actions on the various Forest resources. How each of these factors was considered in my decision is detailed below:

Responding to the Issues

Fragmentation

Fragmentation is a general term that is routinely applied to both forests and forest habitat. *Forests* are fragmented when forested land is developed. *Forest habitat* is fragmented by activities that change forest composition or age-class structure in a way that isolates or interrupts habitat for specific species or species groups. Acquisition of private lands to better consolidate federal holdings is generally the most effective tool we have to combat forest fragmentation, and consequently most of the analysis conducted to evaluate and compare the alternatives focused on the potential for fragmentation of forest habitat.

The wide-ranging nature of some forest wildlife species requires relatively large, continuous parcels of habitat to meet their behavioral needs. This is especially important when managing for wide-foraging, forest-nesting bird species native to the Daniel Boone. The Selected Alternative provides for a mosaic of habitat conditions to meet the diverse needs of plant and animal species found on the national forest. However, it also includes management direction for maintaining a portion of the forest in larger blocks of relatively

closed canopy conditions that are required for interior habitat species, including an objective to create and maintain at least three 7,400-acre blocks of cerulean warbler habitat. The desired conditions for the Riparian Corridor and Cliffline Prescription Areas that are a part of the Selected Alternative will also provide a degree of high-canopy forest habitat connectivity across the national forest.

The Selected Alternative creates a moderate level of early-successional forest conditions, which is expected to result in a moderate level of within-forest habitat fragmentation, as would Alternatives C and D. Only Alternative B would be expected to provide a low level of within-forest habitat fragmentation. Some people believe that forest habitat fragmentation can be reduced on the national forest by relying on early-successional forest on private lands to meet the needs of species for such habitat. The presence of quality early-successional habitat on surrounding private land will be considered during part of project-level analysis, and will be used to help make decisions about where best to manage for such habitat on the Daniel Boone. However, at this programmatic planning level, private lands cannot be counted upon with certainty to provide these habitat conditions, nor will they be available to support the full spectrum of multiple uses associated with these conditions. In addition, regulations require that habitat be provided to support viable populations on lands covered by the Forest Plan, which does not include private lands.

I have chosen the Selected Alternative because it recognizes the unique role that the Daniel Boone National Forest plays in providing older, interior forest habitats in balance with the recognition of the importance of native pine forest, woodland, grassland, and early successional habitats.

Old-Growth

The old-growth forest condition is a natural, though generally missing, component of the forest ecosystem on the Daniel Boone National Forest. It has been nearly eliminated over the last couple of centuries as eastern Kentucky was settled, farmed, and heavily logged early in the 20th century before the national forest was established. For this reason, in part, old-growth values extend beyond just its ecological contributions. It is also viewed by many with spiritual value, providing a deeply felt connection to forest conditions that may have evolved with more limited human influence.

The Selected Alternative includes Prescription Area allocations that have the potential to result in more than 250,000 acres of old-growth conditions over time, including Clifty and Beaver Creek Wildernesses, Red River Gorge, existing and proposed Research Natural Areas, Cliffline Community, existing and proposed Wild and Scenic River corridors, the area around Significant Bat Caves, and Natural Arch Scenic Area. Management of these areas will be focused on other objectives, but the desired conditions that we will be managing for are expected to eventually result in old-growth conditions.

The Selected Alternative also includes a Designated Old-Growth Prescription Area of approximately 15,000 acres distributed among eight units. These areas of the forest will be managed to create old-growth conditions that provide species compositions and geographical distribution not met on the rest of the national forest.

Although we have no knowledge of any forest stands that currently possess all the attributes of an old-growth ecosystem, we have identified stands in various locations around the forest that are considered to be *possible* old-growth based on their age. These will be evaluated in the future and site-specific decisions will be made about their future management.

Alternative A, the 1985 Forest Plan, has no areas designated for management of old-growth. Neither does Alternative B-1; however, it would have the largest acreage moving toward old-growth conditions of all the alternatives because of the large area devoted to custodial management. The other alternatives would result in relatively similar amounts of land area moving toward old-growth conditions.

Selecting Alternative C-1 gives the Daniel Boone National Forest a Revised Forest Plan that will provide a range of old-growth types that are well distributed across the Forest, and in amounts that will assure it can be retained even in the event of large disturbance events. It also provides for the opportunity to apply active management to some of the designated old-growth areas as a means to develop old-growth ecosystem attributes more quickly than relying strictly on natural processes.

Rare Communities

The Daniel Boone contains a diverse landscape with many rare or uncommon plant or animal communities and associations. Rare communities are assemblages of plants and animals that occupy a small portion of the landscape, but contribute significantly to plant and animal diversity. They generally are characterized by relatively discrete boundaries and are small in area. Many unique or special biological areas contain a relatively high density of rare species, some of which are federally listed as endangered or threatened.

Because of their importance to biological diversity and the small area affected, maintenance and restoration of these areas, as well as inventory and monitoring are a high priority. Consequently, all of the alternatives except A would establish a Rare Community Prescription Area that provides management direction applicable to twelve different community types, including seeps, swamps, natural ponds, canebrakes, and glades. The management direction for this Prescription Area is designed to provide for the continued viability of these important communities.

The Selected Alternative provides a good balance between the need to protect rare communities of plants and animals from undesirable or unintended disturbance, and the need to sometimes apply management actions that would enhance species welfare and the functioning of the communities. Alternatives A, B-1, D, and E-1 are expected to result in a lower potential for overall benefits to rare communities than is Alternative C-1. Only Alternative C, because of the lesser emphasis on dispersed recreation and therefore reduced risk to some rare communities, would be expected to have a greater overall benefit to rare communities. Even so, I feel that the somewhat greater risk of adverse effects associated with dispersed recreation activities can be mitigated through careful management.

Proposed, Endangered, Threatened, and Sensitive Species

Of the significant issues considered in making my decision on the Selected Alternative, none carried a greater weight than the effects on federally Proposed, Endangered, Threatened (PET), and Forest Service Sensitive species found on the Daniel Boone. The Endangered Species Act requires that federal agencies seek to conserve threatened and endangered species, including proposed species, and Forest Service policy is that conservation and recovery of PET species be given priority in management. The Forest Service also pursues recovery by identifying a category of species termed Sensitive, whose downward population trends have created a particular concern for the viability of their populations.

Because of the priority placed on conservation and recovery of PET and Sensitive species, there is not a wide range of projected effects between the alternatives. The range is also limited by the need to meet basic protection requirements under the Endangered Species Act, regardless of which alternative would be chosen. The projected differences between the alternatives have more to do with the opportunities to manage for recovery of these species.

A belief reflected in a number of the public comments is that the best way to provide for protection, recovery, and maintenance of PET and Sensitive species is to minimize the amount of human influence on the species and their habitat. I disagree for two reasons. The first is that human influence is just too prevalent to remove completely. The fragmented ownership of the National Forest System land and the human influences that extend onto the national forest resources from private lands make this objective unattainable. The second reason is that I strongly disagree that all human influence conveys an adverse effect on PET and Sensitive species. In fact, the habitat conditions for a number of these species can be provided only with active management intervention. In other instances the necessary conditions can be created in a shorter time span than might occur without active management.

For example, Alternative B-1, with its emphasis on custodial management, includes just enough active management to maintain minimum levels of species viability. However, with these minimum levels, uncontrollable events such as weather, disease, and insect infestations would be more likely to adversely affect those species whose populations are in a precarious position.

All of the alternatives analyzed in detail provide for the protection of proposed, threatened, endangered, and sensitive species and provide habitat for the wide variety of other species that also inhabit the national forest. The Selected Alternative employs strong conservation measures to protect or actively restore habitat for all native plants and animals—with an emphasis on rare species and the rare communities that support them. In addition to the Forest-wide management direction relevant to these species and communities, the Selected Alternative establishes prescription areas such as the Riparian Corridor, Cliffline, Rare Communities, and Significant Bat Cave that play important roles in maintaining the biological diversity of the Daniel Boone National Forest.

Even with an emphasis on protection of PET and Sensitive species, conflicts can still occur. Such is the case with Indiana bat. Some of the management activities, specifically cutting certain trees and using managed fire during particular times of the year, that are

necessary for achieving other important objectives carry some small potential to harm individual bats. For this reason, we entered into formal consultation with the U.S. Fish and Wildlife Service so that they could provide us with their opinion on the potential to do harm and provide us with any other measures that might be necessary to ensure that the continued existence of the species is not jeopardized. Those measures are described in the *Biological Opinion* for the Revised Forest Plan.

Fish and Wildlife Management

National Forest lands provide opportunities to address wildlife management and interests in ways not always possible on most other lands. The Daniel Boone National Forest is large enough to accommodate the wide-ranging habitat needs of numerous species. As a public land manager, the Forest Service can provide for broad biological diversity and make hunting, fishing, and viewing opportunities available to help fulfill public interests that may be limited or restricted on private lands.

There is very little difference between alternatives C, C-1, and D in their objectives for terrestrial and aquatic habitats. Alternative B-1 provides lesser amounts of habitat conditions that require active management for their restoration and maintenance, such as wooded grassland/shrubland, woodland, and early successional forest. Alternative E-1 provides for lesser amounts of wooded grassland/shrubland and woodland, but a greater representation of early successional forest.

The Selected Alternative (C-1) provides management direction for all of the important habitat components, including grassy openings, wooded grassland/shrublands, early successional forest, mast and den producing tree species, riparian forest, and perennial stream and lake aquatic habitats. To better meet anticipated hunting demand, the Selected Alternative also establishes a Ruffed Grouse Emphasis Prescription Area of approximately 10,500 acres distributed between two separate areas and includes an objective to evaluate the Redbird Ranger District for the establishment of a third unit.

Aquatic and Riparian Areas

A clean and stable flow of water was one of the original reasons for establishment of the national forests and remains among the most valued of national forest resources today. For this reason, the effects on soil and water, including riparian, resources played a prominent role in my selection of an alternative.

All of the alternatives, except Alternative A, provide for the allocation of a Riparian Corridor Prescription Area. The management direction for this prescription area provides for maintaining a high level of water quality and aquatic habitat. It also provides for the management of the riparian corridor to create and maintain the conditions required by both the aquatic and terrestrial species that utilize this area of the national forest, and meets or exceeds Kentucky Best Management Practices.

The Large Reservoirs Prescription Area is established in association with Cave Run Lake, Laurel River Lake, and Lake Cumberland, and extends 300 feet inland from their summer pool levels. This prescription is common to all of the alternatives and its management direction will help assure that high quality water is available for valuable fisheries and water-based recreational pursuits.

In recognition of the essential nature of clean drinking water, all of the alternatives except Alternative A include a Source Water Protection Prescription Area. The management direction in this prescription area is designed to protect municipal drinking water sources. There are 13 of these protection areas containing National Forest System land.

In spite of the similarities described above, there are projected differences between the alternatives in factors potentially affecting aquatic and riparian conditions, such as the amount of bare soil that could be present, increases in water yield, the amount of fragmentation of aquatic habitat, and the amount of disturbance to riparian habitat. In considering these differences, I find that the Selected Alternative is expected to leave less than 2 percent of the forest with bare soil per decade, would result in less than 1 percent increase in water yields, would result in a low level of aquatic habitat fragmentation, and a moderately low amount of riparian disturbance. I believe that these results are consistent with the need for national forests to provide for protection of watersheds and will satisfy the public interest in clean water, and healthy aquatic and riparian systems.

Fire Management

Uncontrolled fire can be a serious threat to forest resources as well as to urban and other non-forest development. The Daniel Boone National Forest has an unfortunate history of damaging arson fires. On the other hand, controlled fire can be a valuable tool for safely reducing fuel accumulations and manipulating vegetation to achieve management objectives related to habitat and ecosystem health.

The repeated occurrence of fire on the Daniel Boone has shaped the vegetative composition for thousands of years. We know that aboriginal natives burned the forests of eastern Kentucky for thousands of years prior to European settlement. The first European settlers in turn adopted many of the same burning practices to clear land, reduce undesirable insects, and improve hunting conditions.

These human-ignited and occasional lightning fires worked to create an open woodland condition with older aged oaks and pines and a grassy or shrubby understory. This open, savannah-like, woodland is now largely missing from the landscape due to fire suppression and the subsequent ecological changes that favor species that flourish in shadier, fire-free conditions. In part for these reasons, Alternatives C, C-1, and D include a very aggressive objective for the use of prescribed burning as a means to restore this important ecosystem component. Alternatives B-1 and E-1, because of their overall management themes, include a much smaller objective that would provide only the minimum habitat needed by species found on the Daniel Boone.

By selecting Alternative C-1, we will be able to accomplish several important objectives related to restoring and maintaining important ecosystem components and functions.

The careful use of managed fire has been shown to be an important tool in regenerating oaks and southern pines. It is also essential in preventing the extirpation of pitch pine from Kentucky. The Selected Alternative sets an objective of increasing the annual amount of prescribed burning on the national forest from 7,500 acres the first year of implementation to as much as 50,000 acres by the tenth year.

The increase in prescribed burning will necessarily result in an increase in particulate matter emissions from the smoke that is created. After reviewing the analysis in the EIS, I am satisfied that the projected increases are within acceptable levels and will meet all air quality regulations.

Forest Health

A healthy, resilient forest includes clean water, clean air, fertile soils, and abundant and diverse fish and wildlife populations. By the same token, healthy forest vegetation determines the health of our watersheds and soils, our riparian and aquatic ecosystems, the quality of habitat for wildlife, the ability of our national forest to filter our air and provide beautiful scenery, bountiful recreation opportunities, and important forest products. The spread of native and non-native invasive species of plants, insects, and disease; increased levels of tree stocking; and the continued exclusion of fire take a toll on national forest ecosystem health.

Many aspects of this issue are covered under other issues, including Fragmentation; Rare Communities; Endangered, Threatened, and Sensitive Species; Fish and Wildlife Management; Aquatic and Riparian Areas; and Fire Management. The remaining aspects to cover include restoration and maintenance of our native forest communities, non-native invasive species and insect and disease problems.

The custodial emphasis of Alternative B-1 appeals to some people, but it leaves the forest vulnerable to threats that it has never faced before. Non-native invasive species such as chestnut blight and the organism that causes Dutch elm disease have already changed the face of forests in eastern Kentucky and others are poised to inflict more damaging change. Insects such as gypsy moth and two-lined chestnut borer have the potential to cause widespread mortality of oaks; hemlock wooly adelgid is a threat to the Daniel Boone's hemlocks; and emerald ash borer is causing heavy mortality in the ash of Michigan and northern Ohio with the potential to move into Kentucky. Some individual pests are combining with predisposing environmental factors such as climate, site productivity, and tree age to create a syndrome known as oak decline. Thirty-six percent of the Daniel Boone National Forest is at risk of oak decline.

No amount of forest management can completely prevent the effects of invasive species. However, there are proven treatments available to reduce the forest's susceptibility to catastrophic damage in the face of a number of these threats and to provide some measure of control when they are active. Alternative B-1 generally does not provide for applying these treatments, which include tree cutting and harvesting.

The Selected Alternative increases the use of prescribed fire to restore the open, savannah-like, woodlands now largely missing from the landscape due to fire exclusion, along with the southern yellow pine communities recently decimated by the southern pine beetle. This alternative also includes objectives for improving the resiliency of forest stands by thinning, burning, establishing regeneration (seedlings and saplings) in the understory of some older-aged stands, conducting salvage and sanitation harvests, and controlling or eradicating invasive species where possible.

Among the other alternatives, only Alternative C provides the same level of emphasis on forest health as the Selected Alternative. The Selected Alternative gives us management

tools to use when they are needed, while still providing many of the other values reflected in Alternative B-1, including full protection of rare communities; streamside and riparian areas; threatened, endangered, sensitive, and locally rare species habitat and watersheds; designated old-growth areas; watershed restoration areas; and management, maintenance, and restoration of forest communities.

Timber Products

Timber production raises several issues, including methods, amounts, locations, and types for harvest. Concerns have been raised and confusion generated by the allocation of lands suitable for timber production. Many comments from the public expressed concern about the amount of timber products that would come from the National Forest and opinion continues to be divided on this issue. Many recognize that commercial timber harvesting is an important tool for managing forest vegetation to create desired conditions and that timber production plays an important economic role in some local communities. Others fear that timber harvesting does more harm to the forest than good, and that associated economic incentives and pressures lead to its misuse.

Alternative A (1985 Forest Plan) and Alternative E-1 are based on an earlier management emphasis related to the timber resource—an emphasis on harvesting timber for the products that are produced. Alternative B emphasizes a custodial approach that includes only the minimum amount of harvesting needed to provide the habitat required to keep all species populations viable.

In recent years the Forest Service has recognized that it is time to adopt a new approach for the harvesting of timber on the national forests. This new approach is reflected in Alternatives C, C-1, and D. By choosing Alternative C-1, I am establishing a new role for timber harvesting on the Daniel Boone National Forest. Timber harvesting in the future will be used first and foremost as a tool to achieve desired ecosystem conditions, including thinning to reduce overcrowding and establish more open woodland, woodland/grassland, and woodland/shrubland conditions; and regenerating to control age and species diversity. It is the desired ecosystem conditions spelled out by the Revised Forest Plan that will determine when and where timber harvesting is used.

The Revised Forest Plan identifies approximately 347,800 acres as suitable for timber production. This is an allocation decision required by the National Forest Management Act, and in the context of our new role for timber harvesting simply means that desired ecosystem conditions can be best achieved when timber is harvested on a scheduled basis on these areas of the national forest. The allowable sale quantity (ASQ) from these acres is calculated to be 21.9 MMCF (million cubic feet) for the first decade. This is the maximum amount of volume that could be removed without threatening the long-term sustained yield of the timber resource on these lands.

Of confusion to many people is the fact that some timber harvesting will also take place on certain lands identified as not suitable for timber production. All this means is that the harvesting that will take place will not be on a scheduled basis, but will be driven by the difference between existing conditions and desired future conditions. To help clarify this distinction, in the changes made between the DEIS and FEIS, two sub-categories – *Unsuitable for Timber Production—Timber harvest not allowed*, and *Unsuitable for*

Timber Production—Tree cutting, tree removal, or timber harvest may occur on an unscheduled basis to attain desired future conditions – were created to more clearly convey where the public might expect to see timber harvest activities and where they would not. The projected volume produced from those areas determined to be unsuitable for timber production is 1.0 MMCF for the first decade.

Changes in national forest management in the past several decades demonstrate our ongoing commitment to stewardship and listening to citizens. Retaining timber harvesting on the Daniel Boone National Forest allows us to carry out vital management of the forest vegetation, improving habitat conditions and the forest's capacity to withstand large-scale disturbances, while also demonstrating environmentally-sensitive and sustainable management practices to private landowners, and industrial timber producers.

Minerals

The American economy is powered by mineral resources such as oil, gas and coal. Congress has passed various laws providing for the exploration and development of mineral resources, including oil and gas, on National Forest System lands. Federal mineral resources are divided into two categories: 1) leasable minerals and 2) mineral materials. Leasable minerals are managed in cooperation with the U.S. Department of Interior, and include oil, gas, coal, metallic minerals, and other hardrock leasable minerals. Mineral materials are managed by the Forest Service, and include road aggregate, landscaping rock, rip-rap, and other earthen construction materials. Mineral materials are used to build and maintain trails, roads, campgrounds; to control erosion and sedimentation; to restore riparian and aquatic habitat; to repair flood damage; etc.

The federal government owns the rights to all minerals on only about 33 percent of the Daniel Boone National Forest land. Mineral rights on the remaining 67 percent of the National Forest acreage are reserved and outstanding in private ownership.

Alternatives C-1 and D would make federal minerals available to a comparable degree as Alternative A (1985 Forest Plan). Alternative B-1 would impose a moderately greater degree of constraint on the availability of the mineral resource, and Alternative C a slightly greater degree of constraint. Given the importance of energy resources to the national and local economies, I feel that it is important to make these resources on the Daniel Boone National Forest available, and do it in a way that is consistent with the desired conditions of the other forest resources.

Under the Selected Alternative (C-1), all but approximately 17,400 acres of federally owned minerals are made available for oil and gas leasing and I authorize the Bureau of Land Management to offer these lands for lease. The two existing Wildernesses on the Daniel Boone are congressionally withdrawn from leasing.

Under the Selected Alternative, those areas of Forest Service-administered surface over federally owned minerals in fee that are available for oil and gas leasing include approximately 91,641 acres with a controlled surface use stipulation, 126,259 acres with a Lease Notice stipulation, and 37,153 acres with a No Surface Occupancy stipulation. Areas available for leasing of other federal minerals are similar to those for oil and gas.

Aside from standard and additional stipulations and Federal laws governing mining activities, including the prohibition on surface mining of coal imposed by the Surface Mining Control and Reclamation Act, the Selected Alternative has forestwide and prescription area standards to minimize potential effects to other resources, while ensuring an efficient and effective mineral leasing process.

Recreation Opportunities

National forests lead the nation's public lands in providing recreational opportunities, and the Daniel Boone National Forest provides a variety of dispersed and developed recreational opportunities to an estimated five million visitors each year. The Daniel Boone is perhaps best known for the Red River Gorge with its miles of backcountry trails, the Clifty Wilderness, and miles of cliff providing spectacular views and premier rock climbing opportunities. The Forest also hosts thousands of visitors each year at its developed campgrounds, especially those on Cave Run and Laurel River Lakes. Meeting the growing recreation demands means continually working to find a balance that will minimize user conflicts and protect forest resources.

Two of the alternatives considered in detail, Alternatives C-1 and D, were developed with an emphasis on recreation opportunities. These alternatives are projected to provide the largest user capacity for developed recreation facilities, and among the highest level of total miles of trails. Alternative B-1, with its custodial emphasis would provide the least amount of capacity for developed recreation facilities and the smallest trail system, including a prohibition on all off-highway vehicles.

National forest recreation is such a highly valued resource by the public that I feel it is important to provide a diverse and high quality set of recreation opportunities on the Daniel Boone National Forest. The Selected Alternative (C-1) will accomplish this.

The Developed Recreation Area Prescription Area in the Selected Alternative provides the necessary management direction to provide a safe and enjoyable opportunity for the public at the Forest's many campgrounds and other developed sites.

However, I believe the Daniel Boone recreational niche is in providing those recreation opportunities associated with dispersed, or trail-based, activities. These include wildlife viewing and photography, hunting, fishing, hiking and backpacking, picnicking, horseback riding, rock climbing, off-highway vehicle riding, nature trails, and interpretive opportunities particularly associated with historic, prehistoric, and geologic special interest areas. The Selected Alternative includes management direction designed to enhance these recreational experiences across the Forest and to better manage the activities in a way that minimizes undesirable effects to forest resources.

The Selected Alternative also continues the current policy regarding use of off-highway vehicles (OHVs). Licensed and unlicensed OHVs less than 50 inches in width are permitted only on trails designated for their use. Licensed OHVs, such as 4x4 pickups and some dirt bikes, can use any open National Forest System Road. The Revised Forest Plan includes objectives to provide longer OHV trails and more loop trails than currently exist. The system of trails designated for OHV use is projected to increase by 25 miles to a total of 173 miles.

Recreational demand in the Red River Gorge Geological Area continues to escalate, putting increasing strain on sensitive forest resources such as archaeological sites and rare species. Developing a long-term strategy that accommodates an appropriate level of recreational activities and protects critical resources will require a more focused evaluation than was possible with the forest plan revision effort. For this reason, the Selected Alternative includes an objective to conduct a Limits of Acceptable Change process, including pubic involvement, which will result in development of an implementation strategy for the Gorge. Preparations for conducting this process are already underway by managers on the Daniel Boone.

Although the opportunities for outdoor recreation are extensive and the public demand for these opportunities is seemingly endless, the Forest's capability to meet these demands is neither static nor endless. Visitor preferences can shift over time, and both changing financial limitations and environmental impacts must be considered. I feel that the Selected Alternative provides the most flexibility to meet these public demands in an environmentally sound and financially sustainable manner.

Scenery Resource Management

Visitors generally expect to find natural appearing, visually pleasing landscapes in the National Forest. In a survey completed in July 2002, 87 percent of residents living near the Daniel Boone National Forest felt it was important to manage the Forest in ways that leave it natural in appearance.

Among all the alternatives considered in detail, the most distinct differences in objectives for managing visual quality are in Alternatives A and B-1. Alternative A is projected to have roughly half the acres assigned Very High or High Scenic Integrity Objectives as the other alternatives, and Alternative B-1 is projected to have more than double the acreage with those objectives.

The Selected Alternative (C-1) provides a good balance between providing a highly scenic and natural appearing national forest while still accommodating important management activities and public uses. The Selected Alternative incorporates the agency's new Scenery Management System into the Forest Plan management direction. The Selected Alternative manages 38 percent of the Daniel Boone with a High or Very High scenic integrity objective (compared to 20 percent in the 1985 Forest Plan).

Access Within the Forest

The Daniel Boone National Forest offers a variety of natural resources and recreational opportunities to the public. Access to the National Forest via the road and trail systems is essential to take advantage of these opportunities. Roads help determine where people will go and what they will see. Driving for pleasure is the single largest recreational use on the Forest. On the other hand, too many roads or trails, and inappropriate types, placement or use of roads and trails can limit the Forest's ability to sustain public benefits.

By and large the road system of the Daniel Boone National Forest is complete, but there are still occasional needs for new roads to access trailheads, manage vegetation, or facilitate mineral development. These new roads are offset somewhat by

decommissioning other roads that are no longer needed, so that net road mileage is projected to increase by only five miles in the first decade. The Selected Alternative includes standards for road construction and maintenance to ensure that water quality and wildlife habitat are protected.

A forest-scale Roads Analysis, completed for the Daniel Boone National Forest in conjunction with the revision of the Forest Plan, was used in developing the management direction in the Revised Forest Plan. Roads analysis is an on-going process. The transportation inventory is continually updated as roads are constructed, reconstructed, relocated, reclassified, or decommissioned. In sensitive areas, decisions related to roads will be informed by watershed-scale or project-scale roads analysis. Roads analysis will be conducted concurrently with watershed analysis in priority watersheds. The Forest Supervisor or District Ranger may also decide to perform a watershed-scale or project-scale roads analysis in other areas based on site-specific conditions or issues.

Compared to the other alternatives, the Selected Alternative would provide for the same amount of new National Forest System roads, and is expected to result in more miles of existing road decommissioned than Alternatives A, C, and E-1, but less than Alternatives B-1 and D. I have selected Alternative C-1 because it provides for the very small increase in net mileage of National Forest System roads that I believe is necessary to provide the essential transportation system needed to properly manage the Daniel Boone National Forest, while still providing for the decommissioning of roads that are not needed to meet desired conditions and management objectives.

Specially Designated Areas

Management direction can be tailored to distinctive parts of the National Forest. While Congress must act to designate certain waterways as Wild and Scenic Rivers or certain areas as Wilderness, I have the authority to assign special status to Geological, Botanical, Heritage, or Scenic and other areas.

The largest difference between the alternatives as it pertains to specially designated areas is the treatment of the Wolfpen Inventoried Roadless Area. As part of the process of revising the Forest Plan, the forest was inventoried for areas of potential wilderness, commonly referred to as roadless areas. This inventory was conducted using criteria for roadless areas in the east (which are different from those used in the western U.S.). In the east, a roadless area can contain up to ½ mile of improved Forest Service system road for each 1,000 acres and timber harvesting within the last ten years affecting up to 20% of the area. This is in recognition of the fact that most areas of the eastern National Forests were farms or logged in the early part of this century and old woods roads and wagon trails covered our mountains.

The roadless area inventory identified one area on the Daniel Boone that met the criteria. It is an area of approximately 3,000 acres adjacent to, and west of, Clifty Wilderness, known as Wolfpen. This area is largely undeveloped, but it is not pristine. A low standard Forest Service system road extends into the interior of the area and dispersed recreation activities including hiking, backpacking, and rock climbing occur at relatively high levels.

Of the alternatives considered in detail, only Alternative B-1 recommends the Wolfpen area for Wilderness designation. The Selected Alternative (C-1) does not recommend the Wolfpen area for Wilderness designation, even though many public commenters thought it should be. My concern with making such a recommendation, and the reason I did not is that the management constraints associated with Wilderness designation would make it very difficult to manage the long-established recreation use in this area. Wilderness designation would necessitate significant curtailment of current recreation activities to create an environment largely uninfluenced by human activity. I believe that this area can be managed to retain the roadless characteristics that it now possesses without being designated as Wilderness. To that end, the Red River Gorge Geological Area Prescription Area includes an objective to manage the Wolfpen area to retain its roadless characteristics.

The Selected Alternative recognizes a number of specially designated areas on the Daniel Boone. Prescription areas are allocated for the existing Clifty and Beaver Creek Wildernesses and the Natural Arch Scenic Area.

The Red River Gorge Geological Area Prescription Area, which encompasses the existing Geological Area and National Natural Landmark, includes an objective to nominate the area for listing on the National Register of Historical Places as an Archaeological District. That objective has already been accomplished in the time since the DEIS was released.

Another prescription area is allocated for the already established Rock Creek Research Natural Area, but also includes two areas proposed for Research Natural Area designation at Tight Hollow and Right Fork of Elisha Creek.

Two prescription areas provide management direction for the Wild and Recreational segments of the Red River National Wild and Scenic River and the collective management direction in the Revised Forest Plan meets the requirements for a Comprehensive River Management Plan for this designated river.

Several other prescription areas allocate river corridors that have been found suitable for Congressional designation as Wild and Scenic Rivers. These river segments include Marsh Creek (Wild); Cumberland River, War Fork Creek, and Rockcastle River (Scenic); and Rock Creek and Marsh Creek (Recreational).

Environmentally Preferable Alternative

The Council on Environmental Quality has defined the "environmentally preferable" alternatives as:

"...the alternative that will promote the national environmental policy as expressed in NEPA's section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources."

Alternative B-1 is the environmentally preferable alternative because it has the fewest adverse effects on the environment overall. Alternative B-1 would schedule the least amount of timber harvest, associated road development, and involve the least human-

induced change to the natural environment including the least effects to soil productivity and the lowest increases in sediment yield. Alternative B-1 would also have the most acres allocated to future old-growth.

Although Alternative B-1 may be preferable from the standpoint of the effects on the physical and biological environment, it would also have the least amount of beneficial human-induced effects, and provides less biological diversity than the Selected Alternative. The Selected Alternative provides for more early successional forest and grassy openings, and will result in more restoration of the pine lost recently to the southern pine beetle.

Perhaps most importantly, the Selected Alternative allows the Forest Service to manage the forest to increase its resiliency to an increasing number of insect and disease threats. It provides for thinnings to increase growth and vigor, and prescribed fire to maintain and restore fire-dependent and fire-associated vegetative communities. In the long term, the Selected Alternative provides more options and more positive benefits than Alternative B-1.

Alternatives with Higher Present Net Value

The purposes and principles of National Forest System Land and Resource Management Planning are spelled out in the first paragraph:

"*…The resulting plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner*." [36 CFR §219.1(a)]

Net public benefits can be defined as the overall value to the Nation of all outputs (benefits) and positive effects, less all associated inputs (costs) and negative effects, whether they can be quantitatively valued or not. How do I determine what maximizes long term public benefits?

A component of determining net public benefits is the Present Net Value (PNV), which is used to measure the economic efficiency of each alternative. A comparison of the alternatives' PNVs, is shown in Chapter 3 of the FEIS. As shown in the comparison table, Alternative D has a higher PNV than the Selected Alternative. PNV includes market and non-market values which can be assigned a price, either based on money the Forest Service actually receives for market goods like timber and minerals, or on estimated values from Forest Service research for non-market amenities like wildlife and recreation.

Although the management of the Daniel Boone National Forest's resources and recreation opportunities can be important to local economy, I cannot just consider economic benefits. The Daniel Boone also holds areas of beauty and solitude, clean water, abundant wildlife, and rare species—all of which are important to our spiritual needs and require a mix and balance with other uses. Since PNV does not include these important non-priced benefits, it was not the only criterion I used in my decision.

The Forest must not only provide for today's consumption and enjoyment, but for those of future generations as well. Citizens from all different points of view want us to quantify the costs and benefits of our management, sure in their hearts that this will prove

how important their favorite resource is, and thereby proving their position is the right one. Due to the sheer abundance and variety of opinion in the United States, we in the Forest Service often find ourselves in the midst of controversy. With the passage of new laws and changing values, natural resource issues are growing more complex as demands for all these resources continue to increase.

Based on the preceding discussions it is clear that the Selected Alternative does not have the least impact on the environment nor does it generate as many market valued commodities as other alternatives considered in the FEIS. However, I believe the Selected Alternative achieves a balance between the economic benefits and environmental issues and concerns voiced by the citizens that we have heard from. I believe the Selected Alternative will increase public benefits by moving the Forest towards improved forest health through its emphasis on restoring native landscape diversity and through its special attention to providing functional old-growth ecosystems and unique plant and animal habitats.

I am also confident that the management proposed in the Revised Forest Plan is within the physical and biological capability of the land and can be accomplished without reducing that capability.

CHANGES BETWEEN DRAFT AND FINAL

Over 1,100 individual pieces of mail, including e-mail, were received on the DEIS and Proposed Revised Forest Plan for the Daniel Boone National Forest. Many offered recommendations or requests for changes or improvements in the environmental analysis; identified changes or improvements to the alternatives; or suggested modifications to the goals, objectives, or standards. Comments received on the DEIS and accompanying Proposed Revised Forest Plan also identified the need for several minor improvements to analysis and presentation of materials in the FEIS and Revised Forest Plan. As a result, editorial or other inconsistencies in the presentation of information in the DEIS were corrected for the FEIS.

Specific modifications to Alternative C-1 and the environmental analysis beyond editorial and inconsistency corrections are explained in this section.

General Changes

In several areas of the FEIS, such as sections pertaining to management indicator species, viability analysis, rare communities, minerals and the socioeconomic analysis, additional information was added to clarify the analysis process used and how the information is used in comparing alternatives. The programmatic nature of this decision and the information needed for a programmatic decision is clarified as it contrasts with project-level decision making.

Timber Products

Suitability for timber harvest is clarified for each of the prescription areas. Timber management activities are clarified where some restrictions occur in a prescription area.

An explanation of how forest age class distribution would be monitored and modified to maintain biological diversity on the forest is clarified.

Minerals

Additional information and some clarification of the information in the DEIS was added to provide additional supporting documentation for a leasing consent decision.

Old-Growth

Old-growth terminology and the use of old-growth guidance are clarified in the FEIS and glossary for the Revised Forest Plan.

Riparian Area and Water Quality

Goals, Objectives, and Standards for scoured ephemeral streams and the riparian area are changed to clarify the desired future conditions for these areas and the activities that may occur.

Recreation

Objectives and Standards pertaining to rock climbing are changed to clarify their intent.

PUBLIC INVOLVEMENT

Public involvement in development of the Forest Plan revision began in October 1994 with a letter sent to over 2,000 members of the public asking for input to help identify the need to change the Forest Plan. The need for changes to the Forest Plan was also discussed in April 1995 at a Forest Service interest group meeting attended by representatives from many of the agencies and organizations that have an interest in the management of the Daniel Boone National Forest.

The first issue of the Forest's planning newsletter, *The Boone Planner,* was distributed in June 1996. The purpose of *The Boone Planner* was to introduce interested parties to the forest planning process and keep them updated as the revision process progressed. It would be published periodically throughout the revision of the Forest Plan.

The official beginning to the revision of the Daniel Boone Forest Plan began with the publication in the Federal Register of a Notice of Intent to prepare an environmental impact statement on July 21, 1996. This began a 90-day scoping comment period for the public to comment on the need to revise the Forest Plan and the important issues associated with that need. The Notice of Intent described preliminary issues that had been developed from the experience of implementing the Plan for the past 10 years.

In conjunction with the scoping comment period, a series of open house meetings were held at locations on and off the Forest from July 15, 1996 to August 15, 1996, to provide information on the Forest Plan revision process, the need for a revision and the components of the current Plan that were proposed to change. Members of the core planning team, district rangers, and staff were on hand to answer questions about the Plan revision. The meetings were held at ten locations around the eastern half of Kentucky.

By the end of the scoping comment period the Forest had received over 5,000 comments from the public. A content analysis was done, which led to the final list of 14 significant issues that needed to be addressed in the revision of the Forest Plan.

One of the issues that were identified in many of the scoping comments was the management and use of off-highway vehicles (OHVs) on the Daniel Boone. This was one of the reasons that the Forest Supervisor made the decision to begin work on a Forest Plan amendment, to be completed before the revision of the Forest Plan, which would change management direction pertaining to OHVs. This effort entailed its own set of public involvement initiatives and slowed progress on the Forest Plan revision.

In 1997, the Forest Service initiated another Forest Plan amendment to improve management for a number of species with special habitat needs, and as a response to recent court decisions. This amendment effort was accompanied by its own public involvement strategies.

In August 1998, a workshop was held for citizens to learn more about the national forest planning process and to provide input on alternative management themes that had been developed by the planning team as part of the response to the significant issues. The attendees also provided feedback on what uses the forest should provide and where those uses should occur. Input received at the workshop, from those not attending the workshop, and the original scoping comments was used to modify the alternative management themes and to add new themes.

Beginning in September 2001, the Forest Service began offering an opportunity for members of the public to attend a monthly planning team meeting as a means of learning more about the planning process. Core planning team members provided progress reports and took questions from the attendees.

A second series of forest planning workshops was held for the public in November and December 2001. The objectives of this set of workshops were to provide participants information about the planning process for revising the Forest Plan and to provide an opportunity for input into the development of management alternatives. Attendees were asked to identify areas of the forest they would recommend be managed to emphasize particular conditions. Comments on the Forest's transportation system were also solicited. These workshops were held at seven locations around the eastern half of Kentucky. Attendance at the workshops totaled 378 and consisted of a wide range of interests.

Another segment of the public, State and federal agencies, participated at relevant steps in the revision process e.g., (U.S. Fish and Wildlife Service, Kentucky Department of Fish and Wildlife Resources, Kentucky Division of Water, and Kentucky State Nature Preserves Commission).

Public participation was continued with the release of the Draft Environmental Impact Statement and the Proposed Revised Forest Plan. The release of the documents to the public was heralded with a press conference and was formally announced with the publication of a Notice of Availability (NOA) in the Federal Register on May 16, 2003. Publication of the NOA initiated a 90-day comment period.

Public outreach efforts during the 90-day comment period included nine open houses at locations around the national forest and in outlying urban centers, including Lexington, Louisville, and the northern Kentucky/Cincinnati area. The open houses featured information stations and members of the planning team to explain the planning process and documents, and to answer questions.

The Forest Supervisor and his staff also provided over 40 individual briefings. The recipients for these briefings included congressional staffs from central and eastern Kentucky and western Ohio, tribal officials in North Carolina and Oklahoma, and a number of Kentucky's natural resource and environmental management agencies. Officials from U.S. Fish and Wildlife Service offices in Frankfort, Kentucky and Atlanta, Georgia were briefed, as was the staff of the University of Kentucky Forestry Department.

Briefings were also provided to a number of key interest groups, including professional foresters, forest industry, environmental, recreation, and economic development interests. All of these briefings provided a summary of the planning process, the preferred alternative, and changes between the 1985 Forest Plan and the Proposed Revised Forest Plan.

The comment period yielded over 1,100 responses from 34 states and three foreign countries. Of those responses, 556 were individually drafted and the remainders were form letters and cards. The Forest Service Content Analysis Team in Salt Lake City, Utah, processed all responses and a report summarizing the comments was provided to the Daniel Boone's planning team.

After careful reading, review, and consideration of these comments, the interdisciplinary team made necessary changes as they developed the FEIS. Alternative C-1 was modified in response to public comments and incorporated into the Revised Forest Plan. A detailed summary of public involvement activities is available in Appendix A of the FEIS. A list of all the agencies, organizations, and individuals who received copies of the DEIS, many of whom participated in the planning process, is available in Chapter 5 of the FEIS. A summary of comments received on the DEIS and Proposed Revised Forest Plan is available in Appendix I of the FEIS.

ALTERNATIVES

Six alternatives were analyzed in detail in the DEIS. Six are also considered in detail in the FEIS, including Alternative C-1, the Proposed Revised Forest Plan. Two additional alternatives were considered but eliminated from detailed study for reasons given in Chapter 2 of the FEIS. All alternatives considered in detail meet minimum legal and environmental requirements.

The management theme for each of the alternatives is described briefly below. These alternatives provide a range of responses to the significant issues. More information regarding how each alternative responds to the issues, distinguishing characteristics and acreage allocated for the management and prescription areas are provided in Chapter 2 of

the FEIS. A detailed discussion of the environmental effects of the alternatives considered in detail are included in Chapter 3 of the FEIS.

ALTERNATIVES CONSIDERED, BUT ELIMINATED FROM DETAILED STUDY

Alternative B

Alternative B was developed from public input requesting that no management take place on the Forest. Under this Alternative there would be no human intervention in natural processes. Public facilities would be closed. Recreation, off-road vehicle use, and development of federally owned minerals on the Forest would cease. Comments made at the August 1998 public workshop as well as letters received during the comment period recommended changes in Alternative B that led to the formation of Alternative B-1. The management prescriptions applicable to Alternative B were allocated and mapped, and some preliminary estimates of the impacts of this Alternative were made. After considering this preliminary information, it was determined that Alternative B did not warrant further evaluation because:

- This alternative could not meet all the legal requirements of the National Forest Management Act of 1976 (NFMA), the Multiple-Use Sustained-Yield Act of 1960 (MUSYA) and the Endangered Species Act of 1973 (ESA).
- Other alternatives are being considered in detail, which provide for relatively low levels of management activities.

The Minimum Level Benchmark is "the minimum level of management which would be needed to maintain and protect the unit as part of the National Forest System together with associated costs and benefits" [36 CFR 219.12(e)(1)(i)]. This is essentially the same management emphasis as Alternative B and a further description of the outputs and costs of this level of management can be found in Appendix B.

There is a considerable debate about what is needed to meet the legal requirement to "maintain viable populations of existing native and desired non-native vertebrate species in the planning area" (36 CFR 219.19). There are a number of species that depend on ecological communities that can be maintained only by frequent levels of disturbance. As is explained in Chapter 3 of the DEIS, the Forest Service contends that a significant level of management is needed (at least over the next 10 to 50 years) to restore and maintain these disturbance-dependant communities. A certain amount of human intervention is needed to bring these communities into desired conditions of composition and structure.

Once the desired conditions are attained, natural disturbances and appropriate prescribed fire levels should maintain these communities. However, the levels of management activities that would be needed over the next 10 to 50 years to create these conditions would be inconsistent with Alternative B's overall goal of "minimal human intervention." If it is argued that such a level of activity is acceptable for this Alternative, then it becomes essentially the same as Alternatives B-1.

To further illustrate the need for a certain level of active management, Chapter 4 of the Southern Forest Resource Assessment (Effects of Forest Management On Terrestrial Ecosystems), which included Kentucky in the scope of its analysis, states:

> The exact nature and condition of these forests and disturbance regimes (in centuries past) are unknown, but the presence of large grazing herbivores and fire-adapted forest communities suggests that much of this forest land was relatively open and subject to regular disturbances. (p. 92)
>
> Today there are more forested acres in the South than in the early 1900s. These forests, however, are greatly altered from forests encountered by European settlers. The common theme for the last 10,000 years is that forests were managed to meet human needs, including those of Native Americans. (p. 93)
>
> We should recognize, however, that removal of all human disturbances would have profound effects on the region's biota. (p. 93)
>
> To avoid regional population declines and species losses, land managers must have the flexibility to promote active management. This region's biota does not thrive in a static system, and intentional neglect does nothing but promote additional extinctions and endangerment to species at risk. This flexibility should not extend to the other extreme of promoting intensive forestry for wildlife conservation, but it does suggest that some level of active management will be necessary to maintain many still extant but imperiled species, including many found on present or set-aside lands. (p. 93)

Also, one emphasis of the Forest Service's "Healthy Forests Initiative," is to reduce the fuel overloads that render forests vulnerable to severe wildland fires. Additionally, minimizing human intervention would increase the Forest's susceptibility to insect and disease outbreaks, which would create increased fuel-loading problems as well as increase risks to other resources and to adjacent private lands. Alternative B would not address these problems and areas of concern.

Apart from the low levels of human intervention, the other aspects of Alternative B, such as large acreages in old-growth or late-successional conditions, maintaining roadless area characteristics, and providing for an emphasis on dispersed recreation activities, etc., are similarly represented in Alternative B-1.

Lastly, while Alternative B would address many issues, it does not address other management issues raised by the public. A minimal human intervention approach to vegetation management would not address "Forest Health," which has been identified as an issue of public concern. The need to manage wildlife habitats that are dependant upon a certain level of disturbance would not be addressed. Alternative B also would not address the issue of demand for various forest products, such as high-quality sawtimber, which are of limited supply from private lands, but are available from National Forest System lands.

In view of these factors, the Forest Service concluded that further study of Alternative B is not justified.

Alternative E

Alternative E was originally developed to yield maximum return to the federal treasury from the production of timber and minerals. During the November-December 2001 public involvement period the only comments regarding this Alternative were those stating it did not fulfill the multiple-use mission of the Forest Service. Alternative E was then dropped and replaced with Alternative E-1 that offers a more balanced approach to

Forest management by changing the emphasis from monetary returns to returns in quality and quantity of goods and services.

ALTERNATIVES CONSIDERED IN DETAIL

Six alternative ways of addressing the significant issues were developed in detail in the Environmental Impact Statement. A brief description of each alternative follows. (For a detailed chart on the comparison of alternatives, refer to Chapter 2 in the Final EIS.)

Selected Alternative (C-1)

This Alternative emphasizes the maintenance and restoration of ecological processes and functions while providing for multiple public benefits with added emphasis on recreation. Human activity would influence ecological processes to attain and sustain a high diversity of habitats and species. Legal requirements such as maintaining the viability of native and desirable non-native species (within the capability of the National Forest) and the protection of endangered, threatened, and Forest Service-Sensitive species would be met and habitats enhanced. These species require a variety of habitats, which would also provide a variety of activities, experiences, and products for humans. Some recreation opportunities would be increased. A variety of outdoor recreation activities would be allowed as long as they can be controlled to protect ecosystems. Other forest products would be provided to the extent possible after ecosystem and recreation needs were met.

Alternative C-1 represents the Forest's attempt to balance diverse public interests, diverse habitat needs, and our stewardship responsibilities as we manage the Daniel Boone National Forest over the next decade or longer. This alternative is the alternative that is carried forward as the Revised Forest Plan.

Alternative A

The 1985 Forest Plan, as currently amended, would continue to be implemented. This present management direction will serve as a basis of comparison among alternatives. This alternative is the "no action" alternative whose consideration is required by the implementing regulations of the National Environmental Policy Act (NEPA).

Alternative B-1

The natural interactions of organisms with each other and with their environment (ecological processes) would continue with a minimum of direct human influence. Characteristics of the Forest environment would be affected primarily by natural disturbances such as insects, disease, lightning-caused fire, and weather. These characteristics include the different groupings of plants by size, age, and species (vegetation structure), and the variety of plants and animals. Existing recreation facilities would continue to be managed and some additional primitive types of recreational opportunities would be created. No off-road vehicle trails or facilities would be provided. Primary management activities under this Alternative would be visitor safety, law enforcement, and other custodial elements. Legal requirements such as maintaining the viability of native and desirable non-native species (within the capability of the National

Forest) and the protection of endangered, threatened, and Forest Service-Sensitive species would be fulfilled.

Alternative C

This Alternative would emphasize the maintenance and restoration of ecological processes and functions while providing for multiple public benefits. Human activity would influence ecological processes to attain and sustain a high diversity of habitat and species. Legal requirements such as maintaining the viability of native and desirable non-native species (within the capability of the National Forest) and the protection of endangered, threatened, and Forest Service-Sensitive species would be met and habitats enhanced. These species require a variety of habitats that would also provide a variety of activities, experiences, and products for humans. Other Forest products would be provided to the extent possible after meeting ecosystem needs.

Alternative D

This Alternative would emphasize recreational opportunities to the extent possible. Recreation activities would likely influence ecological processes. Legal requirements such as maintaining the viability of native and desirable non-native species (within the capability of the National Forest) and the protection of endangered, threatened, and Forest Service-Sensitive species would be met and habitats enhanced. Other forest products would be provided to the extent possible after meeting recreation needs.

Alternative E-1

This Alternative would emphasize the quality as well as the quantity of resource products to maximize benefits to local and regional communities. Ecological processes would be directly influenced to increase the yield of forest products. Development and utilization would be managed to ensure that production could be sustained. Product extraction, and other uses such as recreation, would likely influence ecological processes. Legal requirements such as maintaining the viability of native and desirable non-native species (within the capability of the National Forest) and the protection of endangered, threatened, and Forest Service-Sensitive species would be met.

FINDINGS RELATED TO OTHER LAWS AND AUTHORITIES

I have considered the statutes governing management of the Daniel Boone National Forest, and I believe that this decision represents the best possible approach to both harmonizing and reconciling the current statutory duties of the Forest Service.

Clean Air Standards

As discussed in the FEIS, Chapter 3, Physical Environment, Air Resources, all lands managed by the Daniel Boone National Forest are currently in attainment with National Ambient Air Quality Standards and are expected to remain in compliance as the Revised Forest Plan is implemented. Compliance with air quality statutes is directed in the Forest Plan, Chapter 2, Goal 4; and Chapter 3, 2.A-Objective 4.B. and 2.B-Objective 4.B.

Clean Water Act

The Revised Forest Plan contains direction to ensure all projects comply with the requirements of the Clean Water Act. A watershed assessment was completed to show the current condition of streams and watersheds on the National Forest. The results of this assessment informed direction in the Revised Forest Plan. This direction is found in the Forest Plan, Chapter 2, Forestwide Direction; and Chapter 3, Prescription Area 1.E. Riparian Corridor. Analysis of sediment yields and cumulative effects for water quality and associated beneficial uses is discussed in the FEIS, Chapter 3, Physical Resources, Soil and Water.

National Historic Preservation Act

In accordance with a Memorandum of Understanding with the Advisory Council on Historic Preservation, Forest Plans are not undertakings under the National Historic Preservation Act. Consultation pursuant to Section 106 of the Act is not required at the Forest Plan level. As discussed in the Resource Programs, Heritage Resource section of Chapter 3 of the FEIS, activities in the Revised Forest Plan will be in compliance with the Act. Conformance with the Act is directed in the Revised Forest Plan in Chapter 2, Goal 6 and its sub-Goals. Additional direction is provided in FSM 2360.

Endangered Species Act

A Biological Assessment was prepared to evaluate the potential effects of the Revised Forest Plan on federally listed species and their habitat. The Biological Assessment concluded that implementation of Alternative C-1 for the revision of the Forest Plan would have "no effect" on the dromedary pearlymussel, yellow blossom, catspaw, tubercled blossom, cracking pearlymussel, ring pink, clubshell, rough pigtoe and red-cockaded woodpecker; "likely to adversely affect" on the Indiana bat; and "likely to adversely affect" on the remaining 22 federally listed species. Additionally, the Biological Assessment reached a conclusion of "not likely to adversely modify proposed critical habitat" for four stream segments that were recently proposed for designation as critical habitat. The Biological Assessment was transmitted to the U.S. Fish and Wildlife Service on November 13, 2003, with a request to initiate formal consultation.

In the Biological Opinion, the U.S. Fish and Wildlife Service concurred with the determinations of "No effect" on the dromedary pearlymussel, yellow blossom, catspaw, tubercled blossom, cracking pearlymussel, ring pink, clubshell, rough pigtoe and red-cockaded woodpecker; and "Not likely to adversely affect" on 22 species.

Indiana bat. The U.S. Fish and Wildlife Service concluded that the action, as proposed in Alternative C-1 for the Revised Forest Plan, will not jeopardize the continued existence of the Indiana bat and, since no critical habitat has been designated on this Forest, none will be affected. The U.S. Fish and Wildlife Service determined that implementation of Alternative C-1 for the Revised Forest Plan could result in the incidental take of Indiana bat. To minimize incidental take, projects that implement the Revised Forest Plan will comply with the Reasonable and Prudent Measures and Terms and Conditions contained in the Biological Opinion.

Roadless Area Conservation Rule

On January 12, 2001, the Roadless Area Conservation Rule (Roadless Rule) was published in the *Federal Register* (36 CFR 294). The Roadless Rule prohibited with certain exceptions, road construction and reconstruction activities; and the timber cutting, sale, or removal activities that could occur in the inventoried roadless areas (IRAs) identified in the Roadless Rule FEIS. The Roadless Rule in 36 CFR 294.12 and 294.13, identified the exceptions where road construction/reconstruction activities and timber cutting/removal activities would be allowed. The Roadless Rule had an effective date of March 13, 2001. This effective date was later delayed until May 12, 2001.

Subsequently, several groups and States filed lawsuits challenging the Roadless Rule. On July 14, 2003, the United States District Court, Wyoming District (Judge Clarence Brimmer) found the Roadless Rule to be in violation of the National Environmental Policy Act and the Wilderness Act, and permanently enjoined its implementation and set the rule aside. The effect of this ruling is that direction for inventoried roadless areas reverts to the direction provided in the Revised Forest Plan. However, this issue is not settled. Appeals of the Wyoming District Court decision, other litigation, new rulemaking, or new Forest Service directives could result in a change in direction for the management of inventoried roadless areas.

In managing the Wolfpen Inventoried Roadless Area, the Daniel Boone National Forest will follow the management direction contained in this Revised Forest Plan and any Forest Service policy on roadless area management specified in the Forest Service directives. However, should the Roadless Rule become effective, it will supercede this Revised Forest Plan for the Wolfpen Inventoried Roadless Area, which was identified in the Roadless Rule FEIS that was completed in November 2000. According to 36 CFR 294.14(b), should the Roadless Rule become effective, an amendment to this Revised Forest Plan would not be needed to implement its direction.

Other Forest Service decisions with management direction

Other decisions that apply to the management of the Forest are included in the Records of Decision for the Gypsy Moth EIS, and the Southern Pine Beetle EIS.

IMPLEMENTATION

The direction in this Revised Forest Plan will become effective 30 days after the publication of the Notice of Availability (NOA) of the Final Environmental Impact Statement in the Federal Register.

Under the National Forest Management Act (NFMA), “permits, contracts, and other instruments for the use and occupancy” of National Forest System lands are required to be “consistent” with the current Land and Resource Management Plan [16 U.S.C. 1604(i)]. In the plan revision context, NFMA specifically qualifies the requirement in three ways: 1) these documents must be revised only “when necessary”, 2) these documents must be revised “as soon as practicable”, and 3) any revisions are “subject to valid existing rights”.

In developing this Revised Forest Plan, implementing pre-existing decisions and the associated effects of that implementation were considered part of the baseline against which the alternatives were evaluated. Because these earlier decisions were considered in our effects analysis, their implementation is not in conflict with the Revised Forest Plan. Exercising my discretion under NFMA, I have determined that it is not "necessary" to apply the Revised Forest Plan's standards retroactively, and I find that NFMA does not require revision of these pre-existing use and occupancy authorizations. As soon as practicable after approval of the Revised Forest Plan, the Forest Supervisor shall ensure that, subject to valid existing rights, all outstanding and future permits, contracts, cooperative agreements, and other instruments for occupancy and use of affected lands are consistent with the Revised Forest Plan. On a case-by-case basis, the Forest Supervisor shall exercise his/her sound discretion in determining when such consistency is practicable.

"Use and occupancy" agreements include contracts for timber harvesting. Most timber sale decisions are implemented through a three-year contract. While a timber sale contract is a valid existing right, the terms of the contract allow modification. Therefore, modification of a timber contract under its terms would not violate the "valid existing right" provision. Nevertheless, I have decided not to modify any existing timber sale contracts solely due to the Revised Forest Plan. As stated earlier, these contracts were considered part of the baseline against which the alternatives were evaluated. Finally, existing timber contracts will generally have been completed within three years. The decision will be left to the Forest Supervisor to determine whether to modify any decisions authorizing timber sales not currently under contract.

Other classes of "use and occupancy" agreements will be reviewed to determine whether or when the Forest Supervisor should exercise discretion to bring them into compliance with the Revised Forest Plan.

The Forest Supervisor will accomplish many management activities to implement the Revised Forest Plan. Unlike the programmatic decisions listed previously, these activities are site-specific and may require analysis and disclosure of effects under NEPA. These site-specific analyses will be done during implementation of the Revised Forest Plan.

Forest Plans are permissive in that they allow, but do not mandate, the occurrence of certain activities. Site-specific analysis of proposed activities will determine what can be accomplished. The outputs specified in the Revised Forest Plan are estimates and projections based on available information, inventory data, and assumptions.

All activities, many of which are interdependent, may be affected by annual budgets. However, the goals, objectives, standards, management prescriptions, and monitoring questions described in the Revised Forest Plan may not change unless the Plan is amended.

The Plan will be amended or revised to adjust to changing circumstances. For example, the management goals, objectives, and standards stated for the Daniel Boone National Forest in the Revised Forest Plan may, in the near future, be in need of updating or amendment in order to come in line with later assessments or analyses. The amendment process gives us the flexibility to adapt the decisions made today to the realities of

tomorrow. We will provide opportunities to the public to be involved in future changes to the Revised Forest Plan.

APPEAL OPPORTUNITIES

This decision is subject to administrative review pursuant to 36 CFR 217. A written appeal of this decision must be filed in duplicate within 90 days of the date of the published legal notices. Appeals must be filed with:

USDA Forest Service
Attn: NFS-EMC Staff (Barbara Timberlake)
Stop Code 1104
1400 Independence Avenue, SW
Washington, D.C. 20250-1104

Any notice of appeal must be fully consistent with 36 CRF 217.9 and include at a minimum:

- A statement that the document is a Notice of Appeal filed pursuant to 36 CFR part 217;
- The name, address, and telephone number of the appellant;
- Identification of the decision to which the appeal is being made;
- Identification of the document in which the decision is contained, by title and subject, date of the decision, and name and title of the Deciding Officer;
- Identification of the specific portion of the decision to which appeal is made;
- The reasons for appeal, including issues of fact, law, regulation, or policy and, if applicable, specifically how the decision violates law, regulation, or policy; and,
- Identification of the specific change(s) in the decision that the appellant seeks.

Requests to stay implementation of the Revised Forest Plan will not be granted [36 CFR 217.10(a)]

Final decisions on proposed projects will be made on a site-specific basis using appropriate analysis and documentation and in compliance with NEPA. Project decisions may be subject to appeal at that time.

APPROVAL

Questions concerning the appeals process for this decision can be directed to:

USDA Forest Service
Attention: Ecosystem Management Staff (Steve Segovia)
P.O. Box 96090
Washington, D.C. 20090-6090
(202) 205-1066

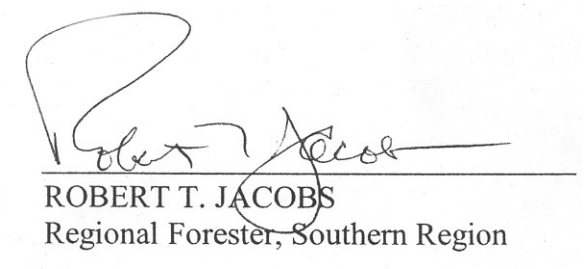
For questions concerning the Daniel Boone Revised Forest Plan, contact:

Benjamin T. Worthington
Forest Supervisor
Daniel Boone National Forest
1700 Bypass Road
Winchester, KY 40391
(859) 745-3100

Reviewers are encouraged to contact the Forest Supervisor before submitting appeals to determine if misunderstandings or concerns can be clarified or resolved.

I am pleased to announce my decision and bring this phase of forest planning to completion. This Revised Forest Plan has been built on a strong foundation of citizen collaboration and the best available science.

As we move forward we will carefully monitor our activities, the condition of the land, the goods and services produced, and the effectiveness of the resource protection measures included in the Revised Forest Plan. I anticipate that implementation of the plan will be conducted in the same spirit of partnership that has characterized this revision process. Working together we can meet the challenges, realize the opportunities, and achieve the goals and objectives of the Daniel Boone Land and Resource Management Plan.



ROBERT T. JACOBS
Regional Forester, Southern Region

April 16, 2004